

CLAIMS

1. A method for integration of a packet-oriented network in a communication system, comprising:

exchanging centralized signaling and service data through a central communication device;

exchanging communication data between an application interface of the central communication device and a computer system;

assigning a plurality of communication control processors to the packet-oriented network, the communication control processors including at least one signaling and user data processor and including at least one exchange processor;

implementing decentralized signaling and user data services through the at least one signaling and user data processor by communicating decentralized signaling and user data;

using a gateway for bilateral exchange of the centralized signaling and user data and the decentralized signaling and user data; and

bilaterally converting the communication data between the application interface and the packet-oriented network, the communication data being bilaterally converted with the at least one exchange processor.

2. The method according to Claim 1, wherein the data through signaling and service data is exchanged according to a session initiation protocol.

3. The method according to Claim 1, wherein the communication data is structured according to a Computer Telephony Applications Protocol.

4. The method according to Claim 1, wherein a user registered at a first communication terminal is registered at a second communication terminal connected to the packet-oriented network if the second communication terminal is marked as available for the user.

5. The method according to Claim 4, wherein to register the second communication terminal marked as available for the user and connected to the packet-oriented network, an event message is transferred via the application interface to the exchange processor, which evaluates the event message.

6. The method according to Claim 5, wherein
a Registration Server is connected to the packet oriented network, and
after the exchange processor evaluates the event message, the exchange processor
transfers a registration message to the Registration Server.

7. The method according to Claim 1, wherein
a Presence and Availability Server and a Registration Server are connected to the
packet-oriented network,
call signaling messages arrive at the Presence and Availability Server,
the Presence and Availability Server takes information for a called user from the call
signaling messages, and
the Registration Server retrieves information on the availability of the called user.

8. The method according to Claim 7, wherein
if the called user is available, an invitation message is sent to a terminal assigned to the
called user.

9. The method according to Claim 8, wherein
if the terminal assigned to the called user is a terminal of the central communication
device, then the invitation message is sent via the gateway.

10. The method according to Claim 9, wherein
the gateway converts the invitation message into a signaling protocol used by the central
communication device.

11. The method according to claim 1, wherein
call data is logged using an event message transferred via the application interface to
the exchange processor.

12. The method according to Claim 11, wherein
the event message is generated as a result of a call setup or a call clearing of a
communication terminal assigned to the central communication device.

13. The method according to Claim 11, wherein
the exchange processor determines call data based on the event message and transfers
the call data in the form of a data record to a storage device.

14. The method according to Claim 13, wherein
the data record contains information about a user, about to who the user is connected,
about the type of call, and about a start time and duration of the call.

15. The method according to claim 1, wherein
a change of an availability state of a communication terminal connected to the packet-
oriented network is notified by the exchange processor via the application interface to the
central communication device.

16. The method according to Claim 15, wherein
a negative availability state of the communication terminal occurs when:
- there is an existing communications connection or a connection is established at the
communication terminal;
- the communication terminal is disconnected from the packet-oriented network; or
- the communication terminal has a defect.

17. The method according to Claim 15, wherein
a negative availability state of the communication terminal connected to the packet-
oriented network is notified via the application interface and is interpreted in the central
communication device as busy state.

18. The method according to claim 1, wherein
when putting the exchange processor into service a status image of all communication
terminals assigned to the central communication device is created through status messages
obtained via the application interface.

19. The method according to Claim 18, wherein the status image contains registration
information of each communication terminal assigned to the central communication device.

20. A system to integrate a packet-oriented network in a communication system,

comprising:

a plurality of communication control processors assigned to the packet-oriented network to implement decentralized signaling and user data services and exchange decentralized signaling and user data, the communication control processors including at least one exchange processor to exchange communication data;

a central communication device comprising:

at least one interface to communicate centralized signaling and user data; and
an application interface to exchange communication data with a computer system via the exchange processor assigned to the packet-oriented network; and
a gateway to bilaterally convert the centralized signaling and user data and the decentralized signaling and user data.